

Spring Care of Bees.

C. P. DADANT.

Rearing Good Queen-Bees.

L. STACHELHAUSEN.



# AMERICAN BEE JOURNAL

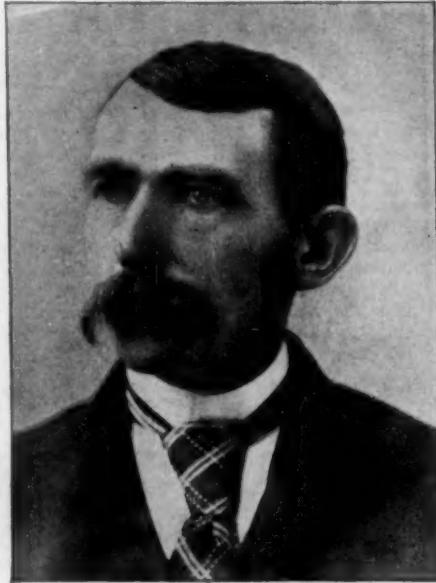
43d Year.

CHICAGO, ILL., MARCH 5, 1903.

No. 10.

WEEKLY

Courtesy Gleanings in Bee-Culture.



THE LATE JOHN H. MARTIN, "THE RAMBLER."  
(See page 146.)



**THE AMERICAN  
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EDITOR,  
**GEORGE W. YORK.**

DEPT. EDITORS,  
DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

**IMPORTANT NOTICES.**

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**Weekly Budget.**

EDITOR E. R. Root is the son of his father as a hobbyist, although he does not ride a hobby with the reckless abandon of the elder Root. On account of his health he has gone back to the beef diet, confining his eating entirely to lean meat with the accompaniment of a small piece of dry toast. Along with this he is somewhat enthusiastic over a set form of muscular exercise under the name of "Physical Culture." Whether as a beef-eater or a gymnastic contortionist, or both, the hearty hope is indulged in this quarter that our good friend of the sprightly and able Gleanings may speedily be as strong as ever—and more, too.

JOHN H. MARTIN, the well-known apicultural writer, died at the age of 63 years, of pneumonia, in the hospital at Havana, Cuba, Jan. 13, 1903. Mr. Martin was perhaps first known as a writer in the American Bee Journal over the nom de plume of "Scientific," and for the past 15 years, as "Rambler," he has contributed regularly to Gleanings a series of illustrated articles of special merit. A kindly, humorous spirit seemed always bubbling to the surface in his writings, and in his many rambles he seemed to make friends

wherever he went. Indeed, in the most dolorous plights, he always seemed to find a funny side.

Mr. Martin was a deacon of the Congregational Church, an earnest Christian, at one time president of the Christian Endeavor Society, and for many years superintendent of the Sunday-school. He left no family, his wife having died many years ago, leaving a shadow on his life that seemed never entirely lifted.

In closing a beautiful tribute to Mr. Martin's life, Editor Root had this to say:

Perhaps no single writer who ever wrote for Gleanings ever called forth more praise from our subscribers than the Rambler. His serious, comic writings, filled as they were with valuable hints, and the exact portrayal of every locality through which he traveled, made him not merely a funny man, but a dignified correspondent, who could and did give us much of value through his writings. While Gleanings mourns his loss it mourns it no more than every subscriber who has followed him through these years; and when the news was flashed back from Cuba that the Rambler was dead, I felt as if a near and dear friend had passed away; and I never met any one who had come in contact with the Rambler who did not hold him in exactly the same high esteem.

The leaders in bee-keeping are fast passing away. During the past few months a number of them have gone, among them being Chas. Dadant and Dr. Mason; and now the Rambler has been called. They will all be missed here by the thousands who enjoyed their personal acquaintance and writings.

## Dr. Miller's New Book

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The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

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# AMERICAN ESTABLISHED IN 1861 BEE JOURNAL THE OLDEST BEE-PAPER IN AMERICA

43d YEAR.

CHICAGO, ILL., MARCH 5, 1903.

No. 10.

## Editorial.

**Aid from the National Government.**  
It is only the right thing that the general government should aid bee-keepers in the way of apicultural investigations to a much greater extent. There is at present some prospect of this. If you desire it, write at once to Hon. Redfield Proctor, United States Senate, Washington, D. C., and urge that in addition to the amount appropriated for the department of Entomology, an extra amount be appropriated for apicultural investigations. Mr. Proctor is Chairman of the Committee on Agriculture and Forestry.

**Snow and Sunshine** is often a bad combination in spring for bees wintering outdoors. Especially is this the case when the snow is very soft. The bright sun entices the bees out, and the dazzling snow seems in some way to affect them so that they drop into it, sinking deeper with each struggle, and soon become so chilled that they never rise again. The beginner is warned to combat the effects of one or both. If the bees are not in much need of a cleansing flight, the easiest thing to do is to place before the entrance of each hive a board to prevent the sun from shining into the hive, unless it be very early or late in the day. If it is thought best that the bees should fly, then the snow should be swept up for a considerable distance about the hives, or else something like hay should be used to cover the snow.

**Swarming Prevention Better than Control.**—Notwithstanding the great advantages of forced swarming over natural swarming, there can be no disputing the point raised by some that it is merely a matter of controlling swarming so as to have it come at the time when it suits the bee-keeper, leaving the entire prevention of swarming a desideratum. Among the many plans tried for prevention of swarming, that of Samuel Simmins attracted considerable attention at one time in this country, but for some reason not many made success of it. The heart of the plan depended upon the fact, supposed or real, that so long as bees had room below the brood-nest, and were occupied building there, there could be no thought of swarming. Mr. Simmins believes that the reason for the failures in this country was that the plans recommended by him were not correctly carried out.

Room for building was to be given below

the brood-nest, and as often as a fair start was made there the combs were to be cut out and moved above. In order to reduce to a minimum the labor of management, the Simmins' Conqueror hive was devised. This consists of an outer case in which the supers, as also the brood-chamber, are received like so many drawers in a bureau, there being room for a super beneath the brood-chamber, so that this lower super can be taken out and moved above without at all disturbing the brood-chamber. While this may be the most convenient hive for the purpose, there is nothing, as Mr. Simmins has pointed out, to prevent trying the plan with other hives.

Regarding the plan, and its comparison with forced swarming, Mr. Simmins writes in a private letter:

But, after all, why swarm at all when under "Prevention" as opposed to "Control" without increase? My "Conqueror" hive allows of starters *below* the colony when required; or, better still, when arranged for comb honey, the super of sections is started (with full sheets in sections) *under* the colony; this super is placed *above* the colony when the bees are crowding into it, bees and all being placed between the colony and the other super of sections already above. The one moved up is followed by another under, and so on in rotation.

"Thus, you are constantly getting the bees to continue comb-building below, and all the while deceiving them by carrying it above"—thus, by starting building below and finishing above, you take all the swarming fever out of them—you keep more powerful colonies, and secure higher results.

I may say that only the "Conqueror" hive-construction will allow this easy shifting of supers. The principle has been adopted in more or less perfect form (mostly imperfect) by all British hive-makers since my system has been developed.

I should indeed be glad to know that you also have made a success of it. The only thing is, will you get the hang of the *correct* construction and management? Many have not, hence failures. SAMUEL SIMMINS.

**Treatment of Foul Brood.**—Much has been said about foul brood and its treatment, and there are probably some who have read little or nothing of the kind, thinking that it is a subject that does not concern them, their bees being entirely healthy. It would be very much better to read all that is written on the subject, even if one never expects to see a case of foul brood. Then one would be free from needless anxiety upon the appearance of some trouble in no way connected with foul brood, and in case of an attack would be ready for prompt action.

At the Ontario convention, as reported in the Canadian Bee Journal, that eminently practical man, Inspector McEvoy, gave the following, all of which will be useful reading for beginners, and part of it may be new to some of the veterans:

For the treatment of it, the bees must be thoroughly cleansed of the old honey that they took from the old hive. There are times when you should shake them on to full sheets of foundation and make a cure, but it is too risky, for while you might cure nine-tenths of the bee-yard, if it worked out in the other one-tenth it would only go on and destroy all you had done.

If it is in the honey season, shake the bees down on little starters, taking all the comb out. Shake them into the empty hive and give them half an inch of comb foundation starters, and do the work in the evening. If the flow should stop or slacken through rains or unsuitable weather, apply the feeders at once and start a flow in that way, and they will draw out these little pieces of foundation. If you allow the little they brought from the old comb to be stored in the new, that will cause trouble; take away, therefore, the built-out starters and give them sheets of foundation, and when this foundation is worked out it is forever gone in every case; this will cure every colony it is found in.

It is one thing to cure the bees, but you may cure with a great loss, that is, you may destroy all the healthy brood, also. Leave about a quarter of the bees (after you shake them down) on one set of combs; take the combs from this, that and the other, enough to make two stories, and leave it about 10 or 12 days, and most of the brood will hatch out; after about 10 days in the honey season shake them down and put them through this treatment again, and give them a queen or queen-cell. In going through the bee-yard put a cross upon those hives; if one is very bad put three crosses; if middling, two, and soon.

Don't do this work in the morning or middle of the day, because if you shake the bees out, and do it in the middle of the day, they will become restless, and some will swarm out and mix in with what you have already treated.

After the honey season is passed, and you find a few have it, even if it is only a few cells, don't think that it will ever cure itself, because as long as a comb lasts it will remain. Those few that are there let alone, but take the others that are sound and feed them sugar syrup until you get a lot of nice sealed combs, feed them down till they are sealed solid. In an evening in October go to the diseased colonies, lift the combs out, shake the bees back and give them five or six combs of these sealed stores. The honey they took out of the infected combs they have to keep, as they have no place to put it; the queen has stopped laying, the cold weather is coming on, and it will be digested and taken out of the way. Just as good a cure as in June or July.

Never attempt to cure any in fruit-bloom—it is too risky—because the weather might change suddenly, and the flow stop coming in, and you will meet with quite a lot of starving larvae; they will consume the unsealed stores, and they won't uncaps the stores they have quick enough to feed the amount of brood. It is not proper to do it then; wait until June.

In these weak colonies you have two or three crosses on, take two or three—or whatever it may require to make a good swarm—cleanse that and cure it. These others that have plenty of fine brood, tier the brood up from the others, and you will make up what you lost; you will gain it in the new.

## Convention Proceedings.

### Chicago-Northwestern Convention.

**Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.**

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 135)

#### ILLINOIS LAW OF FOUL BROOD.

Pres. York—Do you wish to say anything further, or do you wish to take any action by motion? I think we have probably said enough about the necessity of this law, now what steps do you wish to take towards securing it? Do you wish to have a committee appointed?

Mr. Wilcox—I suppose it is not my business to interfere with the Legislature of Illinois.

Dr. Miller—You have the same right on that as any one. You can make a motion that a committee be appointed to co-operate with a committee that may be appointed by the State Association, to draft and prepare what is wanted.

It was moved and seconded that a committee of three be appointed to have in charge the securing, if possible, a foul-brood law for the State of Illinois, to co-operate with a similar committee from the State Association.

Mr. Swift—Wouldn't it be well to have that committee fortified by a preamble and resolution adopted by this convention in favor of such action? They would then have the fortification of the united action.

Pres. York—We might suggest that this committee prepare such a resolution.

Mr. Moore—I want to amend the motion by adding, "and also with the National Association to this end."

Pres. York—I think the mover of that motion will accept that.

Mr. Moore—I say the National specifically. I have been secretary for four years now of this Association, and there have been a multitude of motions made and carried, ordering the secretary and committees to do a great many things, but they have all fallen to the ground. I want this Association to understand that this thing will always follow unless they are carried out in the proper way. Go back when they got their foul-brood law in Wisconsin. If we want a foul-brood law here we have to do as they did and say, "Here, France, we want a foul-brood law in Illinois; here is \$500 to pay your car-fare and hotel bills, and call on all the rest of us for what is necessary." Any mere motion passed, advising and ordering this committee to co-operate with any other Association without funds to carry it out, is as empty as a tin bucket, and I thought I would like to tell you that before you pass this resolution. There is only one way to do it. The National has now about 1000 members; one of the functions of the National is to aid States to get proper laws on their statute books. Why can't the States do that? Why can't the local associations do that? Simply because they can't raise the money. The National has 1000 members, and if this was done by the National, and properly drafted, having the 700,000 bee-keepers in the United States, and get them to put their money up, then there would be no reason why we couldn't get ten or twenty thousand dollars. You will never get a foul-brood law without some money, with one, two, or five hundred dollars, and the services of some man like Mr. France, that has all his time to devote to the Legislature, and a politician, to push it through.

The motion was seconded and carried.

Pres. York—Whom will you have on this committee? If you will name them we will elect them.

Mr. Wilcox—it would seem to me much better for the president to take time to inquire concerning them, and then make the appointment, and I will move that he be authorized to make the appointment of a committee of three, and not to be in haste to do it. Select those men most suitable.

The motion was seconded and carried.

Mr. Wilcox—I don't want to do all the talking, but I am thinking all the while with respect to the suggestion of

Mr. Moore. I think it would be wise to offer a motion here that the surplus fund in the treasury of this Association be applied to defray the expenses of this committee, so far as they may be available.

Pres. York—Do you make that as a motion?

Mr. Wilcox—Yes. We found that difficulty in Wisconsin. Mr. France had to advance all the money, and then we had to make it up the best way we could.

Mr. Moore—I would like to ask for information. Under the present law of the National can money be taken out of their treasury to have laws made in the local States—different States?

Mr. Hutchinson—As I understand it, the funds of the National Association can be used for any purpose that the directors may decide. When we tried it in Michigan we had no doubt but that they would assist us in that way. It was necessary to go at it immediately, and Mr. Root, myself, and George E. Hilton, were in the effort two years, and Mr. Root and myself paid Mr. Hilton's fare, and he gave his time, and we paid his hotel bills and railroad fare, to get the law through at Lansing. The matter was laid before the National Association, hoping that they would help us out, but when it came to a vote they turned us down; but I have always thought, and still think, that that is a legitimate use for their money. Afterwards, the bee-keepers of Michigan partly made up the money to Mr. Root and myself; the rest of it we paid out of our own pockets. It is entirely useless to pass a resolution and send a committee unless you have money back of it. I am in favor of the National Association assisting the different States in getting proper legislation on that subject. Some of those who voted against it, said the reason why they did that was that they thought it was going to open the door for every other State to come in. Suppose it did? Why not? I can't see that as a valid objection.

Mr. France had just come into the room, and was then introduced.

Pres. York—Perhaps Mr. France can give us some advice as to how to proceed.

Mr. France—I haven't been here long enough to know the drift of the conversation that has been going on, or what your plans are, but I certainly know this much, and that is, that the State of Illinois needs laws on foul brood, and you want it from the next Legislature. I am getting samples of foul brood from Illinois frequently, asking for help, which I have gladly given. I think it wise for your legislative committee—don't make that committee too large. We lost our effort two years by making the committee of several. Usually when it gets down to business the committee consists of but very few.

Mr. Hutchinson—Mr. Moore and myself were making the point that there has to be some money spent.

Mr. Moore—The question arose of using the National Association's funds for this purpose.

Mr. France—How much has this convention's treasury to work on?

Pres. York—About \$25.

Mr. France—How much has the State Association of Illinois?

Pres. York—Nothing.

Mr. France—Well, you are nearly in the condition that Wisconsin was in to start.

Mr. Moore—What does it cost? Suppose the Illinois Association would say to you, Mr. France, "You get a foul-brood law, and call on all of the members," how much cash would it take?

Pres. York—How much would you do it for? That's it. [Laughter.]

Mr. France—I don't believe it is as much the cash as every one's shoulder to the wheel. We first attempted it by raising a fund. We raised a fund, and then they said, "France, go ahead and get legislation." It was a drop in the bucket started in the right direction. One man in the Legislature has no influence. I was laughed at all over the Legislature, appealing for the interests of bee-keepers. It was too small a question. Some one even suggested that the next thing some one would want legislation to look after the flies, and, really, one man said they might even want some one to look after the bedbugs! Then I found that it was necessary that each individual bee-keeper see personally, or write, his representative in the Legislature, and have him vote for it, and the vote stood 93 to 2 in our favor. It wasn't money alone. I took \$25 out of my own pocket, and I found one legislative committee before whom I appeared suggested the idea that it took money to run things through the Legislature. He slightly hinted that it might take money to buy our way through. I told him I

was sorry, but I had no money, and I hadn't heard of a bee-keeper disgracing himself by putting his hand down into his pocket for any lobby money. We were there, and we got it.

Mr. Moore—How many bee-keepers have we in this State?

Pres. York—Several thousand.

Mr. Moore—Suppose we have 3000 bee-keepers, what would you do? What must we do to get in a large number of the 3000 bee-keepers to-day? That's the thing that's useful.

Mr. France—By the aid of the editors of the bee-papers I had to lay a plan, and I learned that I must have the names of the bee-keepers. They furnished me the names of the bee-keepers, then I corresponded with them. I sent out 600 letters, and received 180 replies. That was the first response.

Dr. Miller—Now you are talking business.

Mr. France—Then I sent out more, and by-and-by those became interested, and by-and-by I had letters by the basketful when the time came for the Legislature in our State. I think that will be the way you will accomplish it in this State.

Pres. York—We ought to get Mr. France to move over to Illinois for a while. We can employ him!

Mr. Niver—I was just asking Dr. Miller to give me a name here for one of those endless-chain affairs; each one who gets one of these letters is to write ten more. For instance, we could get from the list of the bee-papers a certain number of Illinois bee-keepers, and send out a letter to that effect, that the one who receives it write ten personal letters to ten of his friends, and have each one write the Legislature. In that way couldn't we get a big lot of letters?

Pres. York—Do you wish the letters sent to the committee, or to the committee in the Legislature?

Mr. Niver—for one, I must know who is the representative of my district. I never did know yet.

Mr. Hutchinson—We went so far as to publish them in the bee-papers.

Mr. Niver—As a rule, I think, very few bee-keepers know who represents them in the State Legislature. I don't think I ever knew that fact yet. That is as much of a politician as I am.

Mr. Moore—Ask the policeman on your beat; he will tell you.

Mr. Niver—There is none.

Mr. Moore—Or the postmaster.

Mr. Niver—I know the postmaster. By getting a lot of letters in that way to our committee at the Legislature—whatever plan would be thought best—I think we would get a large number of letters in a very short time on that plan.

Pres. York—That letter can be considered when the committee is appointed.

Mr. France—I will say that I took the pains to correspond in Washington with our representative, and got a copy of the statistics on bee-keeping in the United States Census.

Mr. Moore—Can we get that by writing to our member in Congress?

Mr. France—Yes, sir.

Mr. Moore—What is the title?

Mr. France—United States Census Report of 1900, on Agriculture. I could, by opening my grip, give you the statistics for Illinois, if you want them.

[Messrs. Herman F. Moore, Chas. Clarke, and C. F. Kannenburg, have been appointed as the committee to co-operate with the State Committee on Legislation, who are, Messrs. J. Q. Smith, Jas. A. Stone, and Chas. Becker.—GEORGE W. YORK.]

(Continued next week.)

**Honey as a Health-Food** is the name of a 16-page leaflet (3½ x 6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

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## Contributed Articles.

### Big Honey Harvest Expected—Spring Care of Bees.

BY C. P. DADANT.

I believe that, since I have been in the bee-business, the prospect for a good honey crop has never been better than it is at present—in this part of the world at least. For ten years or more, the white clover has been an entire failure. From different causes—drouth, hard winters, etc.—it has failed to show up as it had done in former years. In 1889, for instance, our crop, from white clover alone, was upwards of 80 barrels. But at that time our pastures, our meadows, were like a white carpet at the time of clover-bloom.

During the past wet season, young white clover has come up in abundance. I can hardly pass a spot of pasture-land without seeing the white clover leaf peeping out from under the snow. The shelter made by snow has been good so far; the green grass and clover have suffered none from the cold. There is a good harvest in prospect, unless something unexpected happens.

The apiarist who is anxious to succeed ought to be well prepared, if this crop comes, to take full advantage of it. If the winter is mild, the bees may prepare themselves fully and in good time, but there is quite a point to be gained by helping them artificially. What they need is early breeding, and plenty of warmth. Our hives must, therefore, be well protected from the cold, especially from the keen northern winds of February and March. If the hives are populous the bees will begin to breed early and will consume plenty of honey. One must make sure that none of them are compelled to stint themselves for want of a sufficient amount. The weak colonies should be reduced to the space they can well cover and should be stimulated, whenever there is mild weather, by a little feed given judiciously where the bees can reach it easily, and where the robbers will not be likely to get to it. The amount fed to colonies for stimulating the breeding must not be large. In most cases one or two teaspoonfuls of warm food will show beneficial results for several days. Feeding small quantities, and feeding often, is much better in spring than feeding large amount of honey all at one time. It is also better to feed diluted sugar than strong-smelling honey. The former will give no smell, while the latter, especially when warm, will have a decided influence on robbing, inducing many of the bees to lurk about the hives in which the colonies are fed.

A very warm situation for hives is not objectionable, in spring, but on the contrary is conducive to good results. I once established an out-apriary at the house of an old Frenchman who had been a gardener, and owned a small hot-house. This little building was established at the head of a ravine which had washed away the soil to a depth of about 6 feet, with a width of some 20 feet, close to the old gardener's home. This ravine was a very ugly-looking chasm and an eye-sore till he devised this hot-house walled in on three sides at the head of it.

Not only the establishing of this building had effectively stopped the enlarging of this ditch, but it had given him a good place for raising early vegetables. The front was all glass, being faced to the southward. When I brought my bees to his place he had quit gardening, his hot-house was useless, and he had hit upon a plan of putting his six hives of bees side by side in this building for winter. When the weather was very cold a wooden front was hung over the glass front of the house so as to keep the bees quiet. But it is astonishing how quiet they would keep even if the front was open, whenever the weather was too cold. No matter how warm it might be inside, they would not sally out, but would remain quietly at home. But it did not take much to stir them up, and the least intrusion was resented by them.

Those hives were rich in stores. They began breeding early in the season, and when I moved some 25 hives to the same apiary, in the month of April, it was plain that either of these six hives could have furnished four times as many bees as my own which had been moved to this place from

an ordinary summer-stand in our home-apriary. When the apple-blossoms opened, those bees were ready for work and took in some surplus—a thing which I had never seen before. When the clover came, the six colonies began to swarm, and I dare say we harvested more swarms and took more honey from those six colonies than from the other 25 put together. Some of the earliest swarms cast some swarms themselves which made good colonies before fall. From 31 or 32 colonies, all told, we increased to some 60, and took four or five thousand pounds of surplus honey.

In my mind this evidences the necessity of keeping our bees well sheltered from the cold in the spring. But to keep them sheltered means nothing if they do not have a plentiful supply from which they can draw to breed, and it is in this that large hives are of use. With large brood-chambers, there is always a plenty of honey, if the colony has been treated right the previous season. So the bees are more likely to be able to breed, when they should. But in any case, it is not a bad policy to give stimulating feed. As I said before, it must be given in small doses. We are not aiming at the storing of honey. All we want is to keep the bees active by giving them to understand that help is at hand. If my reader has never tried it, he does not know how quickly bees get accustomed to being fed. Give a colony nourishment for three days at the same hour and at the same place, and they will expect it the fourth day, exactly as if they were spoiled kittens or well-fed chickens. But the feeding must be done in a judicious manner.

If you want to feed your hens to made them lay, you would not throw your grain to them in a 4-inch snow, or at improper hours. Your aim would be to place it where they could get at it without getting too cold or without having to stay off their perch at an unseemly hour. You must treat your bees as you would your hens—keep their habits in mind, and feed them only when and where they will not be compelled to become chilled to reach the food. Remember that their honey-supply is expected to last them till the warm days come, and if you give them extra feed, give it only when you know that it will do good and can do no harm.

If the bees are fed early in the morning in cold weather, or when they ought to stay in the hive, a great many of them will become excited and will rush out and get chilled. If food is given for stimulating breeding, it should be given in the evening when there is but little chance of the bees venturing out, and when the robber-bees are not likely to disturb them.

Hancock Co., Ill.



## Methods of Rearing Good Queen-Bees.

BY L. STACHELHAUSEN.

**M**R. HENRY ALLEY expresses the opinion that no good queens can be reared by a colony having a fertile queen. This is an astonishing assertion if taken into consideration that in the natural state all queen-larvae during the swarming-time are nursed by bees when a fertile queen is in the hive; the same is true when an old queen is superseded by the bees. The queens reared in queenless colonies are rare exceptions. But I think Mr. Alley is opposed to the upper stories over a queen-excluder for rearing queens in them.

I am of the opinion that in these upper stories as good queens can be reared as in queenless colonies, and by both ways worthless queens, too, if we do not observe some other important points.

Mr. Alley correctly says, on page 725, "The entire thing lies with the nurse-bees." If our bee-keepers had given more attention to the nourishment of bees such questions would have been settled long ago. Such analyses as Mr. Alley asks for were made years ago, and they show that the food given to queen-larvae, or that given to worker-larvae less than four days old, and that for young drone-larvae, have a different chemical composition, nevertheless they all are fully digested pollen and honey (chyle), and are prepared by the young nurse-bees in the true stomach. The chyle is identical with the blood of the bee, showing even the blood-globules. All this is sufficiently proven, but in some of our text-books we do not find it mentioned, or an incorrect explanation is given.

How the same food can have these different compositions is explained in different ways, but as this is more theory I will not say more about it. We know that the bees need a good supply of pollen and honey to prepare royal jelly, or still better if pollen and nectar is gathered from the field. Further, we know that a colony has more and

richer larval food (and this is royal-jelly) if the number of young bees is large compared with the number of young larvae. These young bees prepare the chyle and feed the larvae instinctively; if not enough young larvae are present the young bees find no consumers of the chyle; it remains longer in the stomach and is getting richer in albumen. This surplus of young bees, and consequently of chyle, causes in swarming-time the building of queen-cells, and at last swarming; at other seasons, if a queen is not prolific in egg-laying any more, we have again a surplus of young bees, and the old queen will be superseded. A large surplus of young bees compared with the open brood is the most important thing for rearing queens. In a colony with old bees only, or in a weak colony, we will get worthless queens. We have to consider this, we may rear queens in upper stories or in queenless colonies.

I rear some queens for my own use and none for sale. I rear them in upper stories over an excluder, and at a season when the bees are gathering honey, and I think no better queens can be reared. If I had to feed the colony I would probably prefer a queenless colony.

The advantage of these upper stories is not to get better queens, as by a queenless colony if properly managed, but it is that this colony is not spoiled for honey-production, and is developing in the lower story just as well as any other colony; this is a great advantage. Besides this, the preparing of the colony takes less time and labor. For rearing queens in upper stories we must have a strong colony, or the cells are not accepted; but queenless colonies will rear some kind of a queen even in the poorest condition. For this reason in upper stories there is less danger of getting worthless queens. I know this, because this way of queen-rearing is the main cause that Italian bees, and artificial queens have lost all reputation in Germany.

I will describe the way I use for rearing queen-cells:

1. I take 5 or 6 brood-combs without bees, from some other colonies, and hang them in an upper story over a queen-excluder and over a strong colony.

2. Eight or ten days afterwards nearly all of this brood is capped, many young bees are hatching daily, and as no young larvae are present a surplus of chyle is prepared, and the colony is in proper condition for queen-rearing. Now I remove the hive to a new place, but the upper story with bees and all is set on the old stand. Soon this colony will show all signs of queenlessness, and now (in 2 or 3 hours) I give the brood-strips (Alley's method) between two brood-combs.

3. Twenty-four hours afterwards this hive is arranged, that is, the hive with the queen is set again on the old stand, and on top of it, over the excluder, the story with the now started queen-cells.

Sometimes I manipulate differently. I may give this queenless colony another set of queen cells and remove the first lot to another upper story prepared 7 or 8 days before. Or the first lot of queen-cells may remain in this queenless colony until they are ripe and can be used in nuclei, as this is the easiest way to prepare a queenless colony for cell-building, if such a one should be preferred. Probably it would be better to set this queenless colony with the entrance closed in a cellar and keep it without open brood for a long time, that is, to give the brood-strips later.

Some scientists believe that the youngest bees prepare the richest chyle, what we would call royal-jelly. If this is so, hatching brood should be present in the colony which bears queen-cells, and this is secured by the above plan. Mr. Alley takes away from a strong colony the queen and all the brood, and gives the brood-strips after some hours. Hereby we have the necessary surplus of young bees, and they are in proper condition, but this method could probably be improved by giving some capped brood at the same time with the brood-strips.

It is considered as very important to select larvae for queen-rearing at the correct age. If the larval food for queen and worker larvae (less than 4 days old) would be the same in the same colony, as some believe, any larvae under this age would be good enough; but if the food for the young worker-larvae and the royal jelly is different, as the analyses as yet seem to indicate, we should select larvae as young as possible. To decide this question it would be necessary to analyze larval food taken from queen-cells and worker-cells from the same hive and at the same time. This was not observed in the analyses mentioned above. Besides this, we see one other difference—the queen-larvae are always floating in an abundance of food, the young worker-larvae, too, as long as they are small, receive more food than they consume, but later not so much food is given any more. For this reason very young larvae are preferable

under all circumstances. If we use Alley's brood-strips we can select quite young larvae, not larger than the eggs, or we can select even eggs lying flat on the bottom of the cells, which are very near to hatching.

Artificial cell-cups will not produce better queens than natural ones; their advantages are that we do not need to cut any brood-combs or to destroy any larvae as with the Alley method; they bear rougher handling, but I can't see any necessity for rough handling. The disadvantages are: We can't transfer quite young larvae, just hatched from the egg; as some royal jelly is necessary for this method we must destroy some queen-cells already started, the whole process taking more time and labor than the Alley-strip method. The Alley cells must be started in a queenless colony; with the Doolittle artificial cups this is not necessary, but the most queen-breeders do it, so one of the advantages of artificial cells is lost. Grafting the cells takes more experience, and is more difficult for the beginner than to prepare the brood-strips. What method a bee-keeper will prefer depends entirely upon how great or little he estimates the different advantages and disadvantages. After trying all the different methods I went back to the Alley strips, and can't help believing that if the artificial cell-cups are preferred it is merely a case of fashion.

If the cells are nearly ripe, they are generally introduced to nuclei, or we let them hatch in a nursery and introduce the young virgin queens. If the latter plan is used, the queen should remain in the nursery as short a time as possible—the younger the queen the easier it is to introduce her safely, and a young queen kept in the nursery for some days is always spoiled more or less, and sometimes she will be a dead queen. For these reasons I use the nursery as little as possible—I would rather form new nuclei, if I happen to have more good cells than I need.

The size and strength of the nuclei are of importance, too. For more than 40 years, once in a while somebody recommended using quite small frames, and to use 2 or 3 of them and a few bees to form a nucleus. The greatest disadvantage of these small nuclei is, that too large a percentage of young queens are lost. I tried the plan a few times in different years, and never was satisfied. The nucleus should have at least 2 or 3 of the regular frames and enough bees to cover these frames. On the other hand, the nucleus should not be too strong. In a 2 or 3 frame nucleus the queen is found at once; if 6, 7 or more frames are covered with bees it takes, sometimes, considerably more time and labor. If my nuclei are getting too strong I divide some of them, and if I should get more than I need for queen-rearing I unite with some other one, or strengthen them in another way, and work them for extracted-honey production.

To get the queens fertilized in an upper story over an excluder does not work satisfactorily even if a double excluder is used. When I expected the young queen was laying eggs I found she was missing. As far as I know the plan is abandoned. If we use a wire-cloth in place of the excluder, we have in fact a separate nucleus which could just as well be placed on another stand. The only advantage is, that this nucleus is warmed somewhat by the strong colony in the lower story, and both can be united at once, if the nucleus is not needed any more. For this reason the plan seems good in a Northern climate, if queens should be reared early in the spring.

I rear my queens in February, March, and some in April. In May our main honey-flow commences, and at that time I make forced swarms for comb-honey production. By this manipulation I can get a large number of combs containing capped brood only. If I use these brood-combs for strengthening the nuclei I can give them a hive full of them at once, and in a short time I will have a strong colony, and can get a crop of extracted honey from it the same year.

Bexar Co., Texas.

**Why Not Help a Little**—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

The Premiums offered this week are well worth working for. Look at them.

## The National Association

### N. E. France the New General Manager.

EDITOR AMERICAN BEE JOURNAL, Chicago, Ill.—

Dear Sir:—N. E. France, Platteville, Wis., General Manager and Treasurer-elect of the National Bee-Keepers' Association, has qualified by furnishing a bond as required by the Constitution of said Association. He is, therefore, duly qualified to perform the duties of such office.

Very respectfully, W. F. MARKS,  
Feb. 17, 1903. Chairman Board of Directors.

The above notice ends the General Managership muddle, one of the most unfortunate and inexcusable pieces of mismanagement we have known for a long time. Of course, Mr. France was in no wise responsible for the mismanagement nor the questionable methods resulting in his election, and he condemns them as strongly as any one possibly could. It certainly will not be pleasant for him to serve under the circumstances, as he knows that unfair means were employed to put him in his new position. We believe, however, that he will serve the Association to the best of his ability during the rest of this year.

### Producer's Name on Honey-Packages.

As several articles have appeared in the papers on this topic, I wish to say a word.

I go to any grocery store and buy, if you please, any kind of goods, such as canned fruits, vegetables, fish, breakfast foods, or any other article on the shelf. Each package has an attractive wrapper with flashy colors, also the name and address of the producer or firm said goods are prepared for. Go where I will, the same brand sells for the same price. Suppose I decide that some particular firm puts up the goods that suits me best. I find I can depend upon that brand, it makes no difference whether I buy it of Smith or Jones of my city, or X Y Z of any other city. Remember the producer's name is on each package. Suppose I want to buy that brand from the producer, and save the profit of the middle man. I write the firm for goods or prices, and what do I get? My letter is returned to their local dealer to supply the order, and a reply to me from the producer that their business is done only through their local agents, that they sell direct to wholesale jobbers or the local agents.

All kinds of producers and manufacturing industries, after careful testing every means of marketing and the protection to their business, have found this the only safe way to do business. By this method the producer, as soon as his produce is in marketable shape, can dispose of the entire crop, get his cash, and at once devote his entire time and money to producing the next crop. Marketing is a business that demands more skill and business tact, and the wholesale jobbers have worked every possible means of marketing. It may seem to me as if, when I buy a can of goods, the price I pay is enough to pay profit to each dealer and the producer also. This is partly true, but, the facts are, by these careful business methods and sharp competition the goods are now sold much cheaper than would be possible with any other method.

You say, What has all this got to do with the name on the bee-keeper's honey-packages? I ask, Are we bee-keepers, or our honey, better than others? and is there any better marketing method? Is it not time that we learn to market our goods with attractive labels and our name thereon, and also the National Honey Exchange stamp as the jobber? Then our honey, except for home market, as soon as ready for market, will go to the nearest warehouse to be graded by an expert, and stamped what the contents are. It may be produced by A B of N. Y., or X Y Z of California. The National stamp is a guarantee of the purity and kind of honey. Then, under one grand, united system we can produce the honey and be a partner in the profits of the middle-man, also getting better prices, and avoiding overstocking one market and the next town going without.

The wisdom of this will be proven by the local organizations now incorporated, and in the near future all combining into the one National. Not only the selling of honey, but the buying of supplies, getting better transportation rates on bees by freight, and needed legislation in the various States to protect the bee-keepers. There are over 700,000 bee-keepers in the United States, and quite a large number in Canada, and I am sorry to say only a few over 1000 now belong to the National Bee-Keepers' Association. It is rapidly growing, and the prospects are that many large gatherings of bee-keepers during the year will become a part of the National, as by so joining the annual dues are only 50 cents each to the National. Let every member bring at least one new member into the fold, and add to the strength of the Association. In union there is strength.

N. E. FRANCE,  
General Manager National Bee-Keepers' Association.

P. S.—I am now working to amend a Bill in the New Mexico Legislature, compelling the spraying of fruit-trees, so as to protect the interests of bee-keepers and fruit-growers. There is also an attempt being made to have the Iowa Legislature enact spraying laws.

N. E. F.

## Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

### A Cool Morning.

Sixteen degrees below zero this morning, Feb. 17. That is the coldest it has been this winter. Glad our bees are in the cellar.

### Brillantine for the Hair.

A good brilliantine for dry, harsh hair is made by mixing well together one ounce each of glycerin and bay rum, adding two ounces of clarified honey and four ounces spirits of wine. Rub a little well into the scalp once a week.—"Health and Beauty" Department, Chicago Daily News.

### Bee-Keepers Always Hopeful.

Bee-keepers, as a general rule, are looking forward to the next season, and usually expecting a good crop. It is pleasant to keep up our courage by talking of the favorable signs. The prospects here seem good. The clover covered the ground abundantly last fall, and until late in the season the growth was vigorous. Since then it has been covered most of the time with a light fall of snow. So the promise for 1903 is good.

### Honey in Putting Up Fruit.

Having seen a request in the "Sisters' Department" for persons to give their experience in putting up fruit with honey, I thought I would give mine.

Some years ago I saw in the American Bee Journal an article on preserving grapes in honey, by laying the grapes (picked from the stems) in a jar and pouring extracted honey over them until covered; and that they would keep any length of time. We gave it a trial, but in a short time the acid in the grape caused it to ferment.

Then we experimented still further, by cooking the grapes and honey, and were surprised, on eating them, to find them so delicious. This led me to use it again at different times, in sweetening cherries, raspberries, blackberries, apples and grapes; and we liked it in everything except apples. Our friends, when visiting us, all spoke highly of our fruit, and, with very few exceptions, said they could tell no difference in flavor.

I have never used honey in preserving fruits to any extent, for long cooking destroys the honey-flavor, and makes it strong. I have used it in making grape marmalade, using half sugar, and it was fine.

As to the amount of honey used, I sweeten to suit my

taste, and have used both liquid and granulated. I know it can be used successfully in some kinds of fruit, and will keep any length of time, and the only reason I do not use it every year is the scarcity of honey so much of the time, that sugar is cheaper for me.

I have used honey in making cakes and cookies, and for making popcorn balls nothing could be better; cooking the honey until it will spin from a spoon, and then pour over the corn and make into balls. MRS. J. L. STRONG.  
Page Co., Iowa.

Thank you very much, Mrs. Strong, for giving us so fully your experience with putting up so many different kinds of fruit with honey. I am sure you have given it quite a trial, and proved to your own satisfaction at least, that it can be made a success. I have no doubt that you are right, that it may be cheaper to use sugar, and the lack of honey may prevent a good many from using it. Still, if honey is so much more wholesome it may be cheaper to use it even if it costs more in dollars and cents.

The only kind of fruit that we have tried with honey is strawberries, and they were good. I confess that I should not have known whether they were put up with honey or sugar if they had not been labeled. We used a very fine grade of alfalfa honey which had no very pronounced flavor. It comes the nearest to just a pure sweet of any honey I ever tasted, and for that reason is fine for cooking purposes.

I have made honey popcorn balls, only I used part sugar. They were fine. Next time I am going to try all honey and see what success I have.

The person who uses the most honey in our family is my mother, and she uses a small quantity at almost every meal, and has done so for some years. Last Sunday (Feb. 15) she celebrated her 84th birthday. She is a remarkably preserved woman for her age, both physically and mentally. One thing that is a little out of the ordinary is, that she never uses tea or coffee. For breakfast she has a drink of hot water, honey and cream, and seems to enjoy it as much as most people advanced in years do their tea and coffee. How much of her good health may be attributed to the use of honey I don't know, but I believe it is good for her.

## \* The Afterthought. \*

The "Old Reliable" seen through New and Unreliable Glasses.  
By E. E. HASTY, Sta. B Rural, Toledo, O.

### THE "SNIPPER" AMONG BEE-KEEPERS.

"Many a true word is spoken in jest"—and many an apt saying, without father or mother, is born of a typographical error. When Carlyle wrote the hackneyed old expression, "Dead Sea apples," the types made it "Dead Sea apes;" and in that form it went round the world with a rush. We rather need a name for the man who produces honey—white, amber, and dark, fancy and culls—and mixes all in the same case. According to page 67, he's a "snipper." Instead of cutting an honest garment "according to his cloth," he snips it full of holes. Snips his consignees' good-nature into shreds. Snips badly the consumer's right to have what he orders. Snips his own pocket-book nicely, too—we are almost glad of it. Possibly he thought he could snip off the time and expense required to case correctly. Seems to be a case of snip and be snipped on his part, as evidently his common-sense has been snipped badly. And the moral is, Don't be a Snipper.

Hope the types will soon furnish a name for another fellow worse than the Snipper, who is abroad in the world. A Toledo grocer recently showed me some of the fellow's honey, and wanted my opinion of it. Not graded correctly, eh? That time you missed it. Graded straight as a string; but such a grade—it was a long way below culls—unsealed nectar with the combs not built out to proper thickness yet.

### SIMMINS' SHAKEN SWARM.

The Simmins modification of the shaken swarm deserves a trial. We want to see what "locality" it is going to work in. To have no increase and no weak colony would be just splendid. Practically, what's to hinder the bees of No. 2 from going back home? And those that don't go will be nurses—not needed in their new home, and decidedly

needed in their old one. And might the queen of No. 1 get bailed? And might the over-abundant nurses with nothing else to do insist on rearing young queens? Mr. S. says No. 2 gives up the idea of swarming. That is reasonable. Would it be worth while for us to find out whether any possible case of swarm-fever might not be halted by ruthlessly getting away all the young nurses too callow to fly home? Page 67.

#### MALT EXTRACT AS A SOURCE OF SUGAR.

Ah, but, but! Malt extract is not taken simply as a source of sugar. It is hoped that that curious presence-action, which is one of the wonders of chemistry, resides in it. Chemicals sometimes do their duty when certain "boss" substances are present, and neglect their duty when the boss is away. If Dr. Hutchinson will go to work and prove that honey is a better digestion-boss than malt extract, that would be something like. At present I believe the dominant word is that honey itself is easy of digestion, but that it interferes with the digestion of other things. Page 67.

#### FELT LIKE GETTING RAMBLER BACK.

And Rambler gone, too! When I heard it I felt a little bit as Orpheus did when he heard Eurydice was dead—felt like getting him back again. Page 68.

#### SWARMING AND AFTER-SWARMING.

I rather guess that Mr. Darling is right, on page 69. It's concerning the period after the prime swarm has gone, the period when after-swarming, with its vexations and its unreasoning persistence, is on the carpet. Queens in the cells mean another swarm; but the idea advanced is that a lot of liberated queens running around on the combs rather constitute an influence in the opposite direction. Imaginably, I should say, you *might* get a swarm inside of an hour by liberating a lot of queens; but if they stay an hour they will swarm no more unless you have missed a cell.

#### MUSTACHED CANUCK NEEDN'T STAND ON HIS HEAD.

And that chap who has no other beard than a mustache which a bumble-bee might select for nesting purposes—the Canadians seem to think that he had best stand on his head when he eats bread and butter and honey. Exception in case the honey is best Canada, when merely inverting the slice would do. Page 70.

## Questions and Answers.

CONDUCTED BY

**DR. C. O. MILLER, Marengo, Ill.**

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

#### Cleaning Moldy Combs.

What can I do with mouldy comb? Is there any special way to clean comb in which brood and bees have died? COLORADO.

ANSWER.—Nothing is needed to be done with either mouldy combs or those in which bees have died except to give them in care of the bees. They will clean them up in short order. A good way is to put a hive full of such combs under the hive of a strong colony. Then let the bees take their time to clean them.

#### What Was the Trouble?

1. One of my colonies of bees came out to-day at 12 o'clock, and settled on the ground near the front of the hive. I looked in the bunch of bees for the queen, but did not see her. I then looked in the hive to see what could be the trouble. Everything seemed to be all right. I found 2 roaches, and saw a little sign of worms, but only a small web at one side at the bottom of the frame. They had 6 or 8 pounds of honey in the hive. The temperature was about 70 degrees to-day. What could be the matter with them, and what made them come out? I put them back and they seem to be satisfied this evening.

2. Is 6 or 8 pounds of honey enough to keep them until March 15, with ordinary weather? NORTH CAROLINA.

ANSWERS.—1. I don't know what the trouble was, nor why the bees came out, unless it was that they had been confined for some time, and became very much excited when the weather warmed up enough for them to fly. Bees that have been wintered in a cellar

swarm out in that way sometimes when taken out in the spring. But I suppose your bees were wintered outdoors, and it is not likely that they had been confined very long; so the best answer I can give is to say I don't know. I'll be glad if some one can give the right answer.

2. That depends upon how early the bees in your part of North Carolina can gather anything in the spring. From the time your letter was written till March 15 is 46 days, and during that time much honey will be used in rearing brood, so that it is somewhat doubtful whether they will have enough to last unless they have some good source from which they can gather before the 46 days are up.

#### Bees Sticking Frames Together.

I am a beginner in the bee-business, and have the Danzenbaker hive. The bees stick the frames together so that it is impossible to lift them out without jarring and making the bees ugly. Is there any way to remedy the trouble? NEW YORK.

ANSWER.—I know of no way of preventing bees from depositing propolis where two surfaces come together as with closed-end frames. Where propolis is troublesome I would rather forego the advantage of closed ends, and use some kind of self-spacers with the smallest possible points of contact practicable.

#### Bees in a Damp Cellar—Best Bees.

What difficulties may be expected from keeping bees in a damp cellar? and how can these difficulties be overcome while the bees are in such a cellar?

2. What is the best breed of bees known? IOWA.

ANSWERS.—1. Diarrhea is likely to result if the temperature is not sufficiently high. Bees have been reported as wintering in the best condition in a very wet cellar when the cellar was kept warm enough and well supplied with fresh air. Obviously the thing to do is to raise the temperature sufficiently, and to see that there is a sufficient change of air.

2. Opinions differ. Italians are quite general favorites.

#### Dividing to Prevent Swarming.

Being a new subscriber to the American Bee Journal I am not informed on methods discussed regarding the dividing of bees to prevent swarming. I am located in the "Alfalfa Belt," and would like to know the most successful way to prevent swarming; and to know if a novice is justified in attempting to do it. NEBRASKA.

ANSWER.—There is nothing difficult or complicated about the matter of shaken swarms, and you may as well start in on it first as last. So much has been said about the modus operandi that it is not necessary, probably, to give any further instruction about it; but if there is any point on which you would like to have light, don't be afraid to ask questions, and I'll answer them to the best of my ability.

#### Feeding Bees in Winter—Best Hives.

A friend gave me 2 colonies last fall, and informed me the hives were filled with honey and would last until spring. Jan. 15 I opened one of the hives, on a fine day, and found the queen and 5000 bees dead, and no honey in the comb. I then went to work (never did such a thing before), took 2 pounds of granulated sugar and made candy and shoved it down between the frames of the other hive. Yesterday (Feb. 10) being a fine day, I opened the hive again and found all the candy gone, and repeated the operation as before.

1. I want to know whether there is a better plan.

2. What is the best hive to have? A friend of mine has a hive with a glass door in the back, and holes in the top for small boxes of comb honey. NEW JERSEY.

ANSWERS.—1. Hardly, unless it would be to lay a cake of candy on top of the frames and then cover up warm.

2. Glass in a hive adds to it, but in a way of expense rather than of value. There are differences of opinions as to what is the best hive. For my own use I prefer the Dovetailed with Miller frames, but have no quarrel with those who prefer something else.

#### Management for Increase.

I have several colonies of bees with the supers on the hive now. Can I take them at swarming-time, as they are the same size of the brood-chamber, move the old hive away with the old queen, and leave the young colony in the place of the old one, and be all right? Is that a good way to increase my bees?

TEXAS.

ANSWER.—If I understand you correctly, your idea is to take away the lower story and put it in a new place, taking the queen with it, leaving on the old stand the upper story, trusting to the bees to rear a new queen in the story that is left on the old stand. The plan may be successful to a certain extent, providing there is brood left on the old stand, among it being eggs or very young brood. But it will be very much better to leave the old queen on the old stand, with the story that has least brood in, for the whole field-force will be left at the old stand. It will also be a good plan to give a queen or a sealed

queen-cell to the part removed. If you have to let the bees do the whole work of rearing their own queen, you will be more sure of a good queen by this plan: Remove the queen to the new stand, leaving most of the brood on the old stand; about a week later make the hives exchange places. You will see that by this means you will have your queen-cells reared in a colony with a strong force of workers, and then when you make the change the old queen on the old stand will have the field-force and a chance to lay all she wants.

### Location for Bees—Transferring.

I am a beginner with bees, but have read a good deal on the management of them.

1. I will give the location that I am in, and would like you to tell me what you think I can obtain from each colony. I am about one mile from a creek bottom, having almost all kinds of growth, such as pine, sweet-gum, red-oak, maple, linden, elm, etc. We have lots of wild flowers,  $1\frac{1}{2}$  acres in peach orchard, a farming country, and no bees except mine. I have 6 colonies, and want to increase to 25. Do you think that will be too many for my location? I am going to run for comb honey, and I can get  $12\frac{1}{2}$  cents per pound.

2. I notice that a writer advises transferring in time of fruit-bloom or about 15 days after swarming. Why should I wait 15 days? I have 3 colonies to transfer. My bees are in very good shape, I guess, for they have some honey, and are watering to-day (Feb. 8). I don't put them in a cellar, but leave them out in the yard. TEXAS.

ANSWERS.—1. I don't know enough to guess within a long ways of what you will get per colony. After you have harvested the honey crops of five years you may be able to tell a little about it, but the succeeding five years may not be at all the same. But I would have no great fear about 25 colonies being too many for your location. Very likely it will support three times as many.

2. Don't you mean 21 days instead of 15? The reason for waiting 21 days is that at the end of 21 days all the worker-brood will be hatched out, leaving no brood to bother about.

### Hives Where Bees Died with Foul-Brood.

I have 25 8-frame Langstroth hives in which the bees died with foul-brood. I have burned the frames and combs. Can I prepare and safely use the hives next spring?

UTAH.

ANSWER.—Good authorities say it is safe to use the hives without doing anything to them. As an extra precaution you can wet the inside with kerosene, and burn it out.

### Feeding Bees in the Cellar.

I have 85 colonies of bees, piled 5 high in a small cellar, with the bottom-board off and the cover on. They are short of feed, some having starved to death already. I do not see how I can feed them all candy on top of the frames, so I can get the cover back on, and so I can pile them again, as they eat it so slowly.

How would it do to feed them honey through the pepper-box feeder over the top of the frames (say 3 or 4 pounds), then replace the covers and repile them as fast as they can be fed, a few at a time?

MNNEOSOTA.

Your plan will answer. At the same time you are using the pepper-box feeders, and in order to expedite matters, are not the hives so placed that you can feed some of the colonies from below? Of course that will be only colonies so strong that the bees are down to the bottom-bars, in which case either honey or candy could be fed. You could also put candy over them, so far as room in the cellar would admit. By making a shallow frame to cover each hive, you could give the candy to each colony, put the frame over the hive, and then put on the cover. That would perhaps be the quickest way, if you do not care for the expense of the frames. A frame an inch or two deep would answer.

### Perhaps Bulged or Crooked Combs.

I am in the bee-business on a small scale, having about 30 colonies, and am buying all I can get a hold of, that are in old boxes, kegs, etc. I hope to increase to 100 by fall. What bothers me is this: When I attempt to examine a colony, I find that when I raise the brood-frames out of the hive I break them, that is, as one is raised out it rubs against the sides of the adjoining ones and tears great, ugly patches in the comb. I used the Heddon-Langstroth hive, and the Langstroth frames, 8 to the hive, for comb honey only. Where is the trouble? I can't have the heart to cause my bees so much work, and I must look after them. I am particular in leveling up my hives each spring. Would it be better for me to use 7 frames instead of 8?

CALIFORNIA.

ANSWER.—I'm not entirely sure whether your frames are built crooked in the frames or not. Of course, if they are built crooked, the crooked part should be cut where necessary and straightened in the frames. I think, however, that you mean the combs are straight in the frames, only they are so crowded together that when you try to lift one out it is rubbed, as you say, against the next comb. I wish I could see your combs; then I could tell better. If they are loose-hanging frames, and there is no dummy in the hive, then you must crowd together a number of the frames so as to make room to lift one out. If there is a dummy, lift that out first, so as to make room

to lift out the first frame. More likely, however, you have fixed-distance frames. Perhaps there is a dummy, but so much propolis is crowded in between the frames that it is harder to lift out the dummy than it is to lift out one of the frames. In that case clean out the propolis from the parts that come in contact, thus making room enough to get the dummy out.

It may be that there is no dummy, but self-spacing frames that crowd the hive full. If so I am sorry for you. But don't be clear discouraged. Go to work and scrape the bee-glue off the parts that come in contact with each other, and if then you haven't room to get the dummy in beside the frames, use one frame less and put in a dummy at one side. But if the dimensions are all right there ought to be plenty of room for eight frames spaced  $1\frac{1}{2}$  inches from center to center and a dummy 5-16 or  $\frac{1}{8}$  wide. The inside width of the hive should be  $12\frac{1}{2}$  inches. It may be you are in a place where propolis is bad, and your frames are bad for it. If so, change to frames spaced with staples, or with nails like the Miller frames would be a great relief to you.

If now, I haven't hit your case, be sure to come again and give me more particulars.

### Sowing Sweet Clover.

As a further contribution to the subject I heartily endorse the following from Herman Betke, of St. Louis Co., Mo.:

"I have seen in the American Bee Journal that there are some inquiries as to the best way to sow sweet clover, and you advise to sow on hard ground, and let live-stock tramp it in. Now this is very good, but one may not have the live-stock, or it may not be convenient to have stock tramp in the seed, so I thought I would give you my way of sowing sweet clover.

"I sow on hard ground, and after sowing give the land a good scratching with a harrow. This will cover some of the seed, and a good rain will wash the loose soil over most of the rest. When the ground is very hard it may be advisable to run the harrow over the ground before sowing, and, of course, after sowing."

### Granulated Honey in Extracting-Combs.

A great many of my extracting-combs were about half filled with honey, last fall, and I delayed extracting until the latter part of November, when I found it had granulated badly, and the extracting was very unsatisfactory, leaving the combs heavy with white granulated honey. What should I do with them before putting them on for the spring flow?

SOUTH CAROLINA.

ANSWER.—You can melt up the whole business, and then when it gets cold pour out the honey, or take off the cake of wax. But that would ruin the combs, and is hardly advisable if the combs are good. Perhaps the best thing is to let the bees clean them out as soon as the weather allows frequent flights. Spray the combs with warm or hot water as often as the bees lick them dry. The combs may be put in the hives with the bees, but the work will be easier and more rapid if the combs be put out some distance from the apiary. If there is a time after bees can fly freely when there is nothing for them to work on, you will find that feeding these combs will be just the thing to boom brood-rearing.

### Feeding Candy in the Cellar.

I don't know whether it is mere bad luck or through ignorance on my part, as a beginner, but my 34 colonies of bees, in the cellar, seem nearly destitute of stores. I have started to feed some of them Vialon candy. They stored honey in the sections until a short time before putting them into the cellar, Nov. 1; and just before putting them in the cellar I fed them until it got too cold. The temperature in the cellar ranges from 38 to 50 degrees, with no sudden changes.

1. How much candy would it take to feed 34 colonies of bees from now until the middle of April?

2. Would it do to set 2 hives on top of each other, with the cover off of the one, and the bottom off of the other, and feed them that way? That would be the same as 17 colonies. Would that be any cheaper? Would they fight and kill each other?

3. When I put the candy in upon the frames, that leaves the cover open about an inch all around. Is that all right? or what should I do?

WISCONSIN.

ANSWERS.—1. The amount of candy consumed by a colony of bees in the cellar from the first of March to the middle of April is very variable. Better give each one not less than 5 or 6 pounds. Some of them may not need a third of it, and some of them may need all. It will not be a waste if you give them more than they need, for they can use it later.

2. Don't think of doing anything of the kind unless you wish to unite and have only 17 colonies remaining. The bees may not fight, but one of the queens will most likely be killed.

3. It may do, but it is leaving the hive pretty open, and it will be better to cover over with old carpet, gunny-sack, or something of the kind.

**Queenie Jeanette** is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

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**Nice Weather for Bees.**

At the present time we are having nice, warm, spring-like weather. The spring birds are singing around, and the blue-bird has come, and it seems as if the backbone of winter is broken. The bees are taking advantage of such nice weather. They are doing finely this winter, and the prospects are good for a good honey crop.

L. A. HAMMOND.  
Washington Co., Md., Feb. 13.

**Having Fine Rains.**

We are having fine rains. Everything is looking all right at this time for a good honey season.

S. Q. CONKLE.  
Orange Co., Calif., Feb. 10.

**Carrying out Cellared Bees for a Flight.**

Referring to the editorial on page 99, as to the benefit of carrying bees out of the cellar to have a flight in winter, I would say that last winter (February, 1902) I took out one colony that seemed to be very uneasy; the day was fine, the bees flew nicely, and after returning them to the cellar they seemed very quiet the balance of the winter. February 1, 1903, was fine day, bees out in winter quarters flew nicely.

The bees in this locality did quite well the last half of last year, beginning with July 3.

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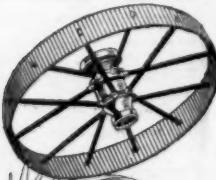
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D.P.G.

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We look forward for a good year the coming season, but can not just tell yet which way the wind will blow.

If the bees confined in the cellar are uneasy, and a day comes in midwinter that will give them a chance to fly freely, I believe it will pay to give them a chance. If snow is on the ground scatter straw freely over it for a few rods around—a little will go a long way. This last advice is for beginners; the veterans know how.

I have been a constant reader of the American Bee Journal for eight years. "The proof of the pudding is in chewing the string," was an old saying, but I prefer to eat the pudding; this I get in what I learn from the "Old Reliable."

L. G. BLAIR.

Grant Co., Wis., Feb. 13.

### A Disagreeable Winter.

It is a bad winter here—cold, windy, and very disagreeable all the time. I saw bees flying a few days ago. They were in fine condition. My 53 colonies are all doing nicely.

HENRY ALLEY.

Essex Co., Mass., Feb. 23.

### Robber-Bees Stinging—Forced Swarming—Smoker-Fuel.

I notice on page 543, about "Robber-Bees Stinging," and I agree with W. W. McNeal, of Cook Co., Ill. I had a colony of black bees (weak), placed away from the rest of my apiary, the rest of my bees being Italians. The Italians started to rob my blacks, and as



### The Thresherman

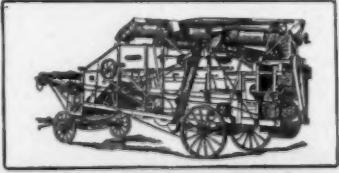
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I went to the robbed colony I very soon found out that robbers do sting. I contracted the entrance so that one bee at a time would pass, and saved my black bees.

I am hard against any way of increase except by natural swarming. When there is no nectar in the fields to gather, why, you do not have to feed the nuclei of brushed swarms; nor any weak ones made by unnatural swarming. You may leave the swarm and return after-swarms, or cut queen-cells out and prevent after-swarms.

For smoker-fuel I find nothing better than hard maple, cut as long as the smoker, and split and put in with a lot of coals in the bottom to start it. One smoker full will last a half day, or longer, if you don't use it much. Jones Co., Iowa. G. B. WILLIAMSON.

### The South Dakota Convention.

The South Dakota Bee-Keepers' Association held its annual convention Jan. 28, in Yankton. There was a good attendance, and there were many subjects of interest discussed. There is a growing interest in apiculture in the State. We expect to double our membership this year, and also to produce double the honey of former years, if the season is favorable. Last season was a poor one for honey in this locality, our average being about 50 pounds per colony of comb honey, and 100 pounds of extracted.

The bees seem to be wintering well, those on the summer stands especially. Mine had a good flight Jan. 15, and they were all alive

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up to that time, and seemed to be strong, and very few bees are dying so far. I winter the bees on the summer stands, and work for comb honey altogether, and natural swarming. Last season I had 17 new swarms, and did not lose a swarm or a queen from spring until packing time for winter. I think that a record-breaker, don't you?

The following is a list of the officers of the South Dakota Bee-Keepers' Association for this year: President, G. L. Dibble; Vice-President, L. A. Syverud; Secretary, J. M. Hobbs, of Yankton; and General Manager, J. J. Duffack. District Vice-Presidents: H. Schell, P. N. Cross, G. L. Chamberlain, L. A. Syverud, and G. L. Dibble.

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### Report for the Season of 1902.

I started last season with 3 colonies in chaff hives, and although it rained nearly every day in June I increased to 6 colonies, and took 260 pounds of honey, which I sold for 15 cents, besides the sections that were not well filled, which we used ourselves.

The main crop was buckwheat, and a lot of fall aster honey, which was as clear as water.

DEAN LAUDENSLAYER.

Clearfield Co., Pa., Feb. 4.

### Cellar-Wintering of Bees.

It is desirable, when a favorable day comes, to take the bees out of the cellar in winter and then return them after a flight! Years ago I wintered my bees in a very dry cellar, where the temperature ran from 30 up to 60 degrees, Fahr., and I wintered bees in there pretty well. I gave them a flight as soon as possible. One year (I don't remember which year it was) I thought I would try to answer this question, and left two colonies in the cellar; the rest I gave a flight, and after I got them on the summer stands they were very weak, and did not come out of the hive. I took them into a warm room and they crawled out on the floor, but could not fly. They looked like a queen full of eggs. About a week after that every one was dead. I believe if I had taken them out with the others they would have kept all right.

Here is my guess: With the uneven temperature and very dry cellar they felt uneasy for a long time, and ate more than they should, got too full, and could not get rid of it.

In 1896 I put the bees into the cellar Nov. 22, where I could keep the temperature between 42 and 46 degrees, and tried this question again. I took a strong colony whose weight was 58 pounds. March 2 we had a nice wind; that day I got the colony out of

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